Bradycardia

History
- SAMPLE
- Medications
- Beta-Blockers
- Calcium channel blockers
- Clonidine
- Digoxin
- Pacemaker

Signs and Symptoms
- HR < 60/min with hypotension,
- acute altered mental status,
- chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia
- Chest pain / Respiratory distress
- Hypotension or Shock
- Altered mental status / Syncope

Differential
- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athletes
- Head injury (elevated ICP) or Stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (1°, 2°, or 3°)
- Overdose

 pearls
- Recommended Exam: Mental Status, Neck, Heart, Lungs, Neuro
- The use of Lidocaine, Beta Blockers, and Calcium Channel Blockers in heart block can worsen Bradycardia and lead to asystole and death.
- Pharmacological treatment of Bradycardia is based upon the presence or absence of symptoms. If symptomatic treat, if asymptomatic, monitor only.
- In wide complex slow rhythm consider hyperkalemia
- Remember: The use of Atropine for PVCs in the presence of a MI may worsen heart damage.
- Consider treatable causes for Bradycardia (Beta Blocker OD, Calcium Channel Blocker OD, etc.)
- Be sure to aggressively oxygenate the patient and support respiratory effort.

Universal Patient Care Protocol
Routine Standard of Care

Assess Rhythm

IV Protocol

12 Lead ECG (If not peri-arrest)
- Atropine - do not give atropine if there is a wide complex rhythm
- 20ml/kg Fluid Bolus (If no pulmonary edema)
- Consider External Cutaneous Pacing early in the unstable patient (especially in 2° or 3° Heart Block)
- Consider Dobutamine/Dopamine Infusion (2-20mcg/kg/min) if patient still hypotensive
- Consider Glucagon IM (1mg) if patient still bradycardic and on beta blockers
- Consider Calcium Chloride IV/IO (1g) if patient still bradycardic and on calcium channel blockers

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This protocol has approved by the Survival Flight Medical Director as of April 2014